

REMARKS

Upon entry of the present amendment, claims 1-13 will remain pending in the above-identified application and stand ready for further action on the merits.

The amendments made herein to the claims do not incorporate new matter into the application as originally filed. For example, support for the amendment to claim 1 occurs in the specification at page 10, lines 7-14 and page 36, lines 10-13. Concerning the amendments to claims 2-4, these simply correct the words "paddle-type", "screw-type" and "ribbon-type" in accordance with the Examiner's suggestion in the outstanding Office Action. Concerning claim 13, the amendment simply changes the word "keeping" to "kept".

**Claim Objections**

Claim 13 was previously objected to based upon the use of the term "keeping" therein. Withdrawal of the objection is requested based upon the amendment of claim 13 herein.

**Claim Rejections Under 35 USC § 112**

Claims 2-5 have been rejected under 35 USC § 112, second paragraph. Reconsideration and withdrawal of this rejection is requested based upon the amendment of claims 2-4 to remove the word "type" from the claims. The claims as instantly amended

particularly and distinctly set forth the invention Applicants regard as their own and 35 USC § 112, second paragraph requires no more. Thus, withdrawal of the outstanding claim rejection under 35 USC § 112, second paragraph is required.

**Claim Rejections Under 35 USC § 102**

Claims 1-9 and 11-13 have been rejected under 35 USC § 102(b) as being anticipated by Yamashita et al. '516 (US 5,468,516), and claims 1-13 have been rejected under 35 USC § 102(a) as being anticipated by Yamashita et al. '501 (US 5,736,501). Reconsideration and withdrawal of each of these rejections is respectfully requested based upon the following considerations.

**The Present Invention and Its Advantages**

As recited in instant claim 1, the present invention is directed to a process for preparing detergent particles. In the processes step (I) a base particle ((a) component) is mixed with a surfactant component ((b) component) under mixing conditions such that the base particle ((a) component) does not substantially undergo breakdown, and wherein the base particle is obtained by spray-drying an aqueous slurry. In the processes step (II), the mixture obtained in step (I) is mixed with a fine powder, with substantially maintaining the shape of the ((a) component) containing the ((b) component) to give detergent particles, wherein

the detergent particles have a degree of particle growth of 1.3 or less, and a bulk density of 500 g/L or more. (See claim 1.)

Accordingly, by way of the present invention there is provided a process for preparing detergent particles in which (i) preparation steps are simplified, (ii) variations in the properties of the detergent particles against variations in the formulated amount of the surfactant composition can be suppressed, (iii) particles can be formulated in large amounts, and (iv) which detergent particles possess excellent flowability. More particularly, by the claimed inventive process, one can obtain detergent particles capable of having a large formulated amount of surfactant, through simplified preparation steps, which particles are excellent in dissolubility and excellent in exudation suppression and anti-caking properties.

#### ***Distinctions Over the Cited Art***

##### **Legal Standard for Determining Anticipation**

Whether a reference is available as prior art, and whether it anticipates, are two quite separate questions. *Hodosh v. Block Drug Co.*, 229 USPQ 182 (Fed. Cir. 1986). The Federal Circuit has spoken clearly on the issue of anticipation. Anticipation requires that each and every element of the claimed invention be disclosed in a single prior art reference or embodied in a single prior art device or practice. *In re Paulsen*, 31 USPQ2d 1671 (Fed. Cir. 1994);

*In re Spada*, 15 USPQ2d 1655 (Fed. Cir. 1990); *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913 (Fed. Cir. 1989); *Diversitech Corp. v. Century Steps, Inc.*, 7 USPQ2d 1315 (Fed. Cir. 1988); *Akzo N.V. v. United States ITC*, 1 USPQ2d 1241 (Fed. Cir. 1986); *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 1 USPQ2d 1081 (Fed. Cir. 1986); *Rolls-Royce Ltd. v. GTE Valeron Corp.*, 231 USPQ 185 (Fed. Cir. 1986); *Kloster Speedsteel AB v. Crucible Inc.*, 230 USPQ 81 (Fed. Cir. 1986); *Great Northern Corp. v. Davis Core & Pad Co.*, 782 F.2d 159, 228 USPQ 356 (Fed. Cir. 1986); *In re Donohue*, 226 USPQ 619 (Fed. Cir. 1985); *W.L. Gore & Assoc. v. Garlock, Inc.*, 220 USPQ 303 (Fed. Cir. 1983); *SSIH Equip. S.A. v. United States ITC*, 218 USPQ 678 (Fed. Cir. 1983); *Minnesota Min. & Mfg. Co. v. Johnson & Johnson Orthopaedics, Inc.*, 24 USPQ2d 1321 (Fed. Cir. 1992)).

The test is the same for a process. Anticipation requires identity of the claimed process and a process of the prior art; the claimed process, including each step thereof, must have been described or embodied, either expressly or inherently, in a single reference. *Glaverbel S.A. v. Northlake Mkt'g & Supp., Inc.*, 33 USPQ2d 1496 (Fed. Cir. 1995). Each of the claimed elements must either be inherent or disclosed expressly and must be arranged as they are arranged in the claim. *Constant v. Advanced Micro-Devices, Inc.*, 7 USPQ2d 1057 (Fed. Cir. 1988); *Verdegaal Bros., Inc. v. Union Oil Co.*, 2 USPQ2d 1051 (Fed. Cir. 1987); *Tyler Refrigeration v. Kysor Indus. Corp.*, 227 USPQ 845 (Fed. Cir. 1985); *RCA Corp. v.*

*Applied Digital Data Sys., Inc.*, 221 USPQ 385 (Fed. Cir. 1984); *Kalman v. Kimberly-Clark Corp.*, 218 USPQ 781 (Fed. Cir. 1983); *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913 (Fed. Cir. 1989); *Carella v. Starlight Archery & Pro Line Co.*, 231 USPQ 644 (Fed. Cir. 1986); *Lindemann Maschinenfabrik v. American Hoist & Derrick Co.*, 221 USPQ 481 (Fed. Cir. 1984); *Connell v. Sears, Roebuck & Co.*, 220 USPQ 193 (Fed. Cir. 1983).

For anticipation, there must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention. *Scripps Clinic & Res. Found. v. Genentech, Inc.*, 18 USPQ2d 1001 (Fed. Cir. 1991). It is the claims that define the claimed invention. And it is claims, not specifications that are anticipated. *Constant v. Advanced Micro-Devices, Inc.*, 7 USPQ2d 1057, 1064 (Fed. Cir. 1988).

The corollary of the rule is that absence from a cited art reference of any claimed element negates anticipation. *Kloster Speedsteel AB v. Crucible Inc.*, 230 USPQ 81 (Fed. Cir. 1986). Almost is not enough. A prior art disclosure that almost meets the standard of anticipation may render a claim unpatentable under §103(a), but it does not anticipate. *Connell v. Sears, Roebuck & Co.*, 220 USPQ 193 (Fed. Cir. 1983). Thus, to find anticipation of a patent claim requires a finding that the claim at issue "reads on" a prior art reference. In other words, if granting patent protection on the disputed claim would allow the patentee to

exclude the public from practicing the prior art, then that claim is anticipated, regardless of whether it also covers subject matter not in the prior art. *Atlas Powder Co. v. IRECO Inc.*, 51 USPQ2d 1943 (Fed. Cir. 1999). However, a reference that lacks an element of the claims cannot anticipate them. *Carman Indus., Inc. v. Wahl*, 220 USPQ 481 (Fed. Cir. 1983).

Yamashita et al. '516

The cited Yamashita et al. reference provides a process for producing nonionic detergent granules. In claim 1, step (2), the following recitation occurs:

"...granulating a mixture obtained in said step (1) by agitating in an agitating mixer provided at the center position thereof with a rotation shaft having an agitation impeller with a clearance between the agitation impeller and an inner wall of the mixer of from 1 to 30 mm, wherein the agitation impeller agitates the mixture at a Froude number of from 1 to 4 to form a layer of said mixture on said inner wall of said mixer so as to increase a bulk density of granules of the mixture, step (2) being carried out for a period of time sufficient to granulate said mixture obtained in said step (1), whereafter step (3) is carried out; and..." (emphasis added)

As shown above, in step (2) of claim 1, in Yamashita '516, the adhesion layer of the mixture is formed on the inner wall by granulating a mixture in an agitating mixer provided at the center position with a rotation shaft having an agitation impeller with a given clearance between the agitation impeller and an inner wall

of the mixer. This step is a compression and rolling granulation (e.g., see column 7, lines 11-45) so that it is different from the mixing conditions as defined in claim 1 of the present application such that the ((a) component) does not substantially undergo breakdown. Accordingly, a degree of particle growth of the thus obtained detergent particles would be rather large in the invention of Yamashita '516, and as such would not fall within the parameters of the instant invention wherein it is specified that the "particles have a degree of particle growth of 1.3 or less".

Based upon the above considerations, it is clear that the cited Yamashita et al. '516 patent does not teach or provide for each of the elements recited in the present claims, and therefore its disclosure is incapable of anticipating the claimed invention, and moreover incapable of rendering the same obvious under 35 USC § 103(a).

Yamashita et al. '501

The cited Yamashita et al. '501 reference is concerned with a method for producing nonionic detergent granules. In the provided process in step (II) a heating/granulating step is set forth as described below:

"...heating the mixture obtained in step (i) at least to either (a) a temperature of not less than a melting point of the obtained mixture of components (i) and (ii) in step (I) or (b) a temperature not less than a melting point of a component having the highest melting point of

components (i) and (ii) in step (i) capable of neutralizing said acid precursor of the anionic surfactant in an agitating mixture thereby forming a gelled product containing said nonionic surfactant, and granulating said gelled product which acts as a binder while tumbling the agitating mixture at either of said temperatures thereby increasing a bulk density, to give nonionic detergent granules having a bulk density of from 0.6 to 1.2 g/ml." (emphasis added)

Accordingly, in step (II) of the process recited in claim 1 of Yamashita et al. '501, there is provided the step of "granulating said gelled product which acts as a binder". Based on this recited step, it is submitted that a degree of particle growth would occur in the Yamashita et al. '501 particles that would be greater than the recitation of "1.3 or less" in Applicants' pending claim 1 noted above. Namely, the particles produced by the process of claim 1 of the Yamashita et al. '501 reference would be expected by those skilled in the art to produce a degree of particle growth above 1.3 as recited in the instantly amended claim 1.

Because of this distinction, it is clear that the cited Yamashita et al. '501 reference is incapable of anticipating Applicants' claimed invention.

Further, because neither of the cited Yamashita references provide any teachings with regard to controlling the degree of particle growth, and provide no teachings or disclosures which would allow one of ordinary skill in the art to arrive at the

instant invention as instantly claimed, including all of its limitations, it follows that said references cannot stand as a proper basis for rejecting any of Applicants' claims under 35 USC § 103 for obviousness, whether such references are considered singularly or in combination.

CONCLUSION

Based upon the amendments and remarks presented herein, the Examiner is respectfully requested to issue a Notice of Allowance, clearly indicating that each of the present claims 1-13 are allowable at present.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact John W. Bailey (Reg. No. 32,881) at the telephone number below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

Attached hereto is a marked-up version of the changes made to the application by this Amendment.

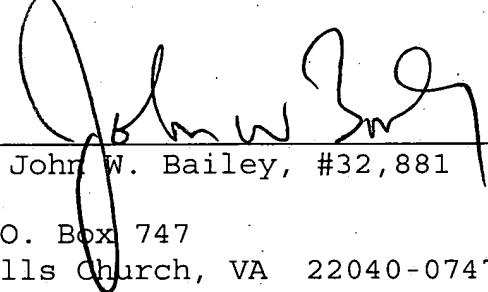
If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees

required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

By

  
John W. Bailey, #32,881

P.O. Box 747  
Falls Church, VA 22040-0747  
(703) 205-8000

JWB/end  
1422-0428P

Attachment: Version with Markings to Show Changes Made

(Rev. 02/20/02)

VERSION WITH MARKINGS TO SHOW CHANGES MADEIN THE CLAIMS:

The claims have been amended as follows:

1. (Amended) A process for preparing detergent particles, comprising the steps of:

(I): mixing a base particle for supporting a surfactant

((a) component); and 15 to 100 parts by weight of a surfactant composition ((b) component), based on 100 parts by weight of said (a) component, the base particle having an average particle size of from 150 to 500  $\mu\text{m}$ , a bulk density of 400 g/L or more, and a particle strength of 50 kg/cm<sup>2</sup> or more, under mixing conditions such that said (a) component does not substantially undergo breakdown, to give a mixture; wherein said base particle is obtained by spray-drying an aqueous slurry and

(II): mixing the mixture obtained in step (I) with 5 to

100 parts by weight of fine powder, based on 100 parts by weight of the mixture, with substantially maintaining the shape of (a) component containing (b) component, to give detergent particles,

wherein the detergent particles have a degree of particle growth of [1.5] 1.3 or less, and a bulk density of 500 g/L or more.

2. (Amended) The process according to claim 1, wherein in said step (I), a mixing operation is carried out by using a mixer comprising agitation impellers of which mixing impellers have a

shape of a paddle[-type], wherein the agitation impellers have a Froude number of from 0.5 to 8, provided where the mixer further comprises disintegration impellers, the mixing operation is carried out under mixing conditions so as not to substantially rotate the disintegration impellers.

3. (Amended) The process according to claim 1, wherein in said step (I), a mixing operation is carried out by using a mixer comprising agitation impellers of which mixing impellers have a shape of a screw[-type], under mixing conditions wherein the agitation impellers have a Froude number of from 0.1 to 4.

4. (Amended) The process according to claim 1, wherein in said step (I), a mixing operation is carried out by using a mixer comprising agitation impellers of which mixing impellers have a shape of a ribbon[-type], under mixing conditions wherein the agitation impellers have a Froude number of from 0.05 to 4.

13. (Twice Amended) The process according to claim 1, wherein the detergent particles have a dissolution rate of 90% or more, under conditions where the resulting detergent particles are supplied in water at 5°C; stirred for 60 seconds under the stirring conditions that 1 g of the detergent particles are supplied to a one-liter beaker having an inner diameter of 105 mm which is charged with one-liter of hard water having 71.2 mg CaCO<sub>3</sub>/L, wherein a molar ratio of Ca/Mg is 7/3, and stirred with a stirring

bar of 35 mm in length and 8 mm in diameter at a rotational speed of 800 rpm; and filtered with a standard sieve having a sieve-opening of 74  $\mu\text{m}$  as defined by JIS Z 8801, wherein the dissolution rate of the detergent particles is calculated by the equation:

$$\text{Dissolution Rate (\%)} = [1 - (T/S)] \times 100$$

wherein S is a weight (g) of the detergent particles supplied; and T is a dry weight (g) of insoluble remnants of the detergent particles remaining on the sieve when an aqueous solution prepared under the above stirring conditions is filtered with the sieve, wherein drying conditions for the insoluble remnants are [keeping] kept at a temperature of 105°C for 1 hour, and then in a desiccator with a silica gel at 25°C for 30 minutes.